

IVANHOE

**Metal Reflectors and Fittings
For Multiple MAZDA Lamps**



CATALOG No. 303

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CLEVELAND, O.

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Price Change

Ivanhoe Metal Reflectors

Effective March 1, 1917, the following increases in list prices will become effective on certain reflectors listed in Catalog No. 303:

SCHEDULE C

Cat. No.	Old List Price Each	New List Price Each	Standard Quantity
0658	\$0.95	\$1.10	12
0659	1.45	1.55	12
0660	1.70	1.80	12
0662	1.45	1.55	12
0663	1.70	1.80	12
A-26	.27	.30	120
A-26 B. B.	.60	.70	120
A-35	.42	.50	60
A-35 B. B.	.75	.90	60
A-55	.44	.55	60
A-55 B. B.	.80	1.00	60
DA-55	.50	.61	60
A-58	.40	.45	60

SCHEDULE R

PD-20	.35	.38	40
PD-40	.45	.53	20
PD-60	.50	.58	20
BPD-20	.32	.35	80
BPD-40	.42	.50	60
BPD-60	.47	.55	40
BPD-100	.72	.85	20
DPD-100	.75	.94	10

IVANHOE

Metal Reflectors and Fittings
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CATALOG No. 303

The prices and data in this Publication are for convenience of customers and every effort is made to avoid error, but this Company does not hold itself responsible for any errors or omissions. Both prices and data are subject to change without notice.

IVANHOE

Metal Reflectors and Fittings

FOR MULTIPLE MAZDA LAMPS

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A complete line of high grade, scientifically designed reflectors and holders for industrial and outdoor lighting.	
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Small, low-priced reflectors for portables, local lighting, etc. Green and brush brass exterior finish.	
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IVANHOE METAL REFLECTORS AND FITTINGS

THE various products shown in this catalog have been grouped, for convenience in reference, into sections as shown on the opposite page. Three schedules of discounts apply: Schedule R, which covers Ivanhoe Metal Reflectors for Industrial Lighting, and certain high grade fittings for MAZDA C Lamps; Schedule C, which includes the Ivanhoe Counterline of low-priced metal reflectors and the Ivanhoe C Line of low-priced fittings for MAZDA C lamps, and Schedule P, covering Promotion Fixtures.

Mazda Lamps

Reflectors recommended for 100-watt lamps are designed for use with either MAZDA B or MAZDA C lamps.

Reflectors recommended for 100, 300, 400 and 500-watt lamps are designed for use with the MAZDA C lamp. If reflectors are required for MAZDA B lamps, in sizes larger than the 100-watt, write for recommendations.

Packing

Standard quantities are packed without charge. Packing on broken quantities, whether the total order exceeds the number of pieces in a standard quantity or not, will be charged at cost.

So far as possible, all shipments will be made in cardboard cartons, because of their convenience, safety and light weight. The minimum shipping weight of standard packages will be 30 pounds. The maximum, 60 pounds.

Discounts

Material listed in this catalog is subject to Schedule "R," Schedule "C" and Schedule "P" discounts as noted on each catalog page.

Shipments

Reflectors and fittings listed in this catalog are shipped from Sebring, Ohio.

Engineering Service

Detailed recommendations for the use of Ivanhoe reflectors are given in the Engineering Section V, at the back of this book. For special problems, the services of our Commercial Engineering Department are at the command of buyers.

Ivanhoe Industrial Line

Schedule R

THE reflectors listed in the following pages are designed to give those definite distributions of light which have been determined by previous experiment to be most satisfactory for the varied requirements of industrial plant, store front, bill-board, and similar lighting installations to which metal reflectors are best adapted.

Light distribution may seem at first to be a highly technical subject, but it is very easily understood when the action of the reflector on light is thought of as a similar process to the action of a hose nozzle on the water that passes through it. Just as the nozzle is adjusted to throw the water in a fine spray over a broad area with a small quantity per square foot, or to concentrate the water into a powerful stream, so is the Reflector by proper design made to distribute the light broadly over an extended area, to concentrate it into a brilliant beam, or to give whatever intermediate distributions are desirable.

Following is an index showing the types of light distribution for which IVANHOE Reflectors are designed and the pages on which the Reflectors are listed.

INDEX

Extensive Distribution

"Cleanezy" Aluminum Reflectors, page 12.

Porcelain Enameled Reflectors, page 11.

In the Extensive Distribution the light rays are brought to a maximum at approximately 45° . For uniform illumination space these reflectors at a distance apart equal to two times the mounting height above the plane to be lighted.

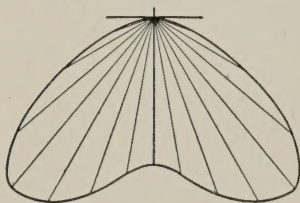


Figure 1

Intensive Distribution

"Cleanezy" Aluminum Reflectors, page 13.

Intensive Reflectors are especially designed for lighting large factory areas.

For *uniform* illumination, they should be spaced at a distance apart equal to $1\frac{1}{4}$ times the mounting height above the plane to be lighted. They are also used for lighting groups of machines such as looms, warpers, lathes, shapers and knitting machines.

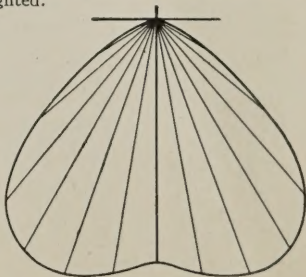


Figure 2

Focusing Distribution

"Cleanzy" Aluminum Reflectors, page 13.

Focusing type reflectors are used for lighting work which requires local illumination of high intensity over a small area. The smaller units may be used over vises, watchmakers' benches, and similar locations. The larger units, mounted pendant on the ceiling, furnish an excellent unit for the lighting of inspection tables and of high and narrow show windows. The large units also may be used to provide uniform general illumination when they should be spaced $\frac{3}{4}$ as far apart as the height above the plane to be lighted.

Distributing Distribution

Porcelain Enameled Reflectors, page 14.

White Paint Enameled Reflectors, page 15.

The Distributing Distribution corresponds to the fine spray from an adjustable nozzle. The light covers a broad area with a low intensity. Distributing Reflectors are usually used in warehouses and similar spaces where they are spaced at from two to three times the mounting height.

Angle Distribution

"Cleanzy" Aluminum Reflectors, page 17. Porcelain Enameled Reflectors, page 18.

Angle type reflectors are used in small single units for the lighting of such machine tools as speed drills, milling machines, shapers and other machines requiring a bright illumination over a small area from a light unit which cannot be placed directly above the work. The larger units may be used for the general illumination of large bays in steel mill buildings where the illumination is provided from large lamps hung from the side columns and for bill-board lighting. Cleanzy Aluminum Reflectors give the distribution of light shown in Figure 5. Porcelain Enameled Reflectors give the distribution shown in Figure 6.

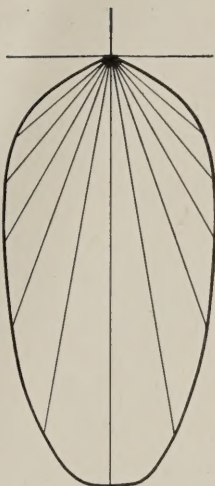


Figure 3

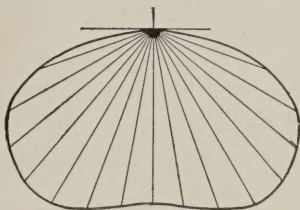


Figure 4

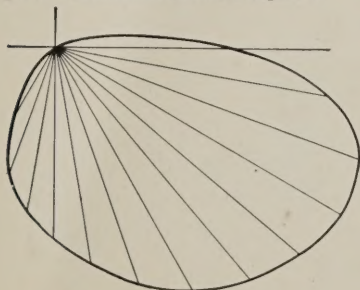


Figure 6

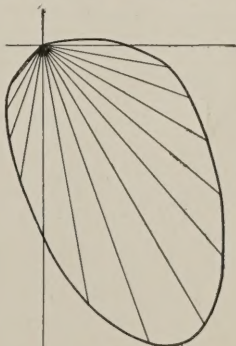


Figure 5

Sec. I. IVANHOE INDUSTRIAL LINE

Catalog Numbering System

The LETTERS and NUMBERS of catalog numbers have the following meaning:

The letters designate in order:

1. Type of holder (B or D).

Note—Reflectors furnished with the Clip Spring Holder have only two letters in their stock numbers. The first letter gives the finish of the reflector and the second gives the light distribution obtained.

2. Kind of finish (A, for Cleanazy aluminum; E, for porcelain enamel; P, for paint enamel).

3. Distribution of Light (E, extensive; I, intensive; F, focusing; D, distributing; L, angle and MM, Mazda Mill distribution).

The number gives the size of the MAZDA lamp with which the reflector should be used to obtain the best results.

EXAMPLE—No. BED 60

(See page 14)

B = $2\frac{1}{4}$ inch heel.

E = Porcelain enamel finish.

D = Distributing light distribution.

60 = Size of MAZDA lamp to be used.

EXAMPLE—No. AE-60

(See page 12)

Clip Spring Holder.

A = "Cleanazy" aluminum finish.

E = Extensive light distribution.

60 = Size of MAZDA lamp to be used.

Sec. I. IVANHOE INDUSTRIAL LINE

HOLDERS For Reflectors

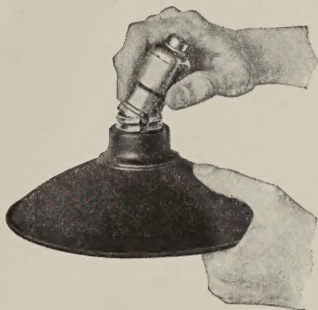
B, D, and clip spring holders are furnished as a part of the reflector. They are not to be ordered separately. While nearly every holder can be fitted to any reflector, orders should be confined as far as possible to the standard combinations shown in **bold faced type**, and must be limited to the combinations listed in this book. The only holder supplied on the 400, 500 and 1000 watt sizes is the B Type, $3\frac{1}{4}$ inch heel.



$2\frac{1}{4}$ in. and $3\frac{1}{4}$ in. Heel
(B Type)

B denotes $2\frac{1}{4}$ inch and $3\frac{1}{4}$ inch heel. The $2\frac{1}{4}$ inch heel is supplied on all reflectors below the 300 watt size. The $3\frac{1}{4}$ inch heel is supplied on reflectors for 300 watt lamps and larger. With the $2\frac{1}{4}$ inch heel use the Form O holder, **never Form H** or holders Nos. 822, 823, 824, 826. With the $3\frac{1}{4}$ inch heel use holders Nos. 622, 635 or 672.

The **Clip Spring Holder** has no letter designation. It provides a quick and dependable method of attaching a metal reflector to a socket. When attaching the clip spring holder to the socket, place the socket shell over the reflector at a small angle. A slight pressure is sufficient to expand the Clip Spring to let the bead of the socket shell slip into the beaded ring of the holder. The tension of the Clip Spring holds the reflector firmly in place. This holder is the product of an automatic machine operation, and it is always uniform in size and tension. It is easy to use, substantial in construction, and positive in operation.



Clip Spring Holder
(Standard)

D denotes clamp strap added to clip spring. Used on heavy reflectors and reflectors subjected to strong vibration.



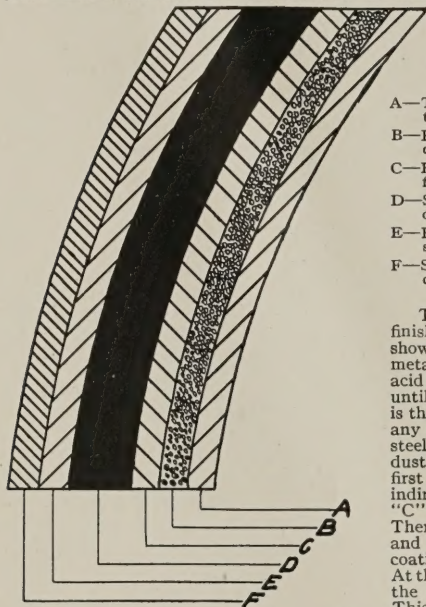
Clamp Strap (D Type)

Sec. I. IVANHOE INDUSTRIAL LINE

Schedule R

Finishes on Reflectors

The Reflectors listed under Schedule R are supplied in three standard finishes. The finish designated by the letter "A" (see catalog numbering system, page 6) is the "Cleavezy" Aluminum finish. The finish designated by the letter "E" is porcelain enamel. The finish designated by the letter "P" is paint enamel. The standard color of the outside finish of all Reflectors is green.



"Cleavezy" Aluminum Finish

- A—Transparent, washable, protective coating.
- B—High efficiency reflecting coat of matte aluminum.
- C—High temperature, white reflecting base.
- D—Special open-hearth deep drawing steel.
- E—High temperature, non-absorbent coating.
- F—Smooth green exterior finish coat.

The "Cleavezy" Aluminum finish is applied in five coats as shown in the illustration. The metal shell is first treated in acid and scrubbed in hot water until it is perfectly clean. It is then quickly dried to prevent any rust formation. The dry steel is cleaned to remove all dust particles. Coat "E" is first applied and baked in indirect heating ovens. Coat "C" is next applied and baked. Then in order, Coat F, Coat B and Coat A are applied, each coating being baked separately. At the lower edge of the reflector the coatings are lapped over. This gives five protective thick-

nesses at the point where in ordinary reflectors rust formation begins.

Reflectors with the ordinary aluminum finish show a marked depreciation in efficiency after a short service. This is caused by dirt particles, which it is almost impossible to remove, lodging in the pores of the aluminum coating.

In the "Cleavezy" finish the transparent coating "A" forms a smooth protective surface over the aluminum. This surface does not collect dirt readily. And it can be cleaned easily by washing with a pure soap lather, or with a solution of four parts warm water and one part ammonia. **Never use scouring materials, lye, or soaps and cleaners having a gritty substance.**

Porcelain Enamel Finish

Our porcelain enamel finish is applied in three coats. The first is a binding coat. The next two are of the best quality of pure white porcelain for the interior, and of a dark green porcelain for the exterior. Porcelain surfaces will not deteriorate under ordinary service. They are easily cleaned, but porcelain is a form of glass and is therefore liable to chipping if subjected to sharp blows.

Paint Enamel Finish

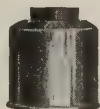
The painted finish is applied smoothly to the steel surface and is baked on at a high temperature. The finish is tough, durable, and permanent in color.

Sec. I. IVANHOE INDUSTRIAL LINE

Schedule R



No. 822



Nos. 823, 824, 826



No. 622



Nos. 635 and 672

This illustration shows how the holders with canopies are taken apart for wiring and how they are mounted on a pipe suspension.

Holders Nos. 622, 635 and 672 are used with those reflectors for multiple lamps of 300 watts and larger which have $3\frac{1}{4}$ inch B Type Heels. No. 635 is No. 622, the top casting machined down, threaded and with a japanned iron canopy set over it, held in place by a lock nut. No. 672 is No. 622 with a green porcelain enameled canopy.

No. 822 is a $2\frac{1}{4}$ inch holder similar to No. 622.

No. 823 is No. 822 with top casting fitted with a weatherproof porcelain canopy of a length sufficient to cover the holder and the ventilating holes in all 100 and 200 watt MAZDA C reflectors.

No. 824 is like No. 823, except that the canopy is shorter to fit the short heel reflectors BEE-40, BEE-60, etc. It is to be used with all B heel reflectors below the 100 watt size.

No. 826 is the same as No. 824, except that the canopy is dark japan instead of porcelain enamel.

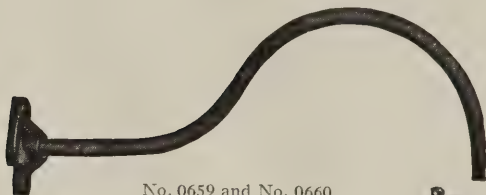
The metal parts of these holders are made of sherardized iron. All of the holders are tapped at the top for $\frac{1}{2}$ -inch pipe. The holders are built for heavy duty service.

Catalog No.	List Price Each	Standard Quantity	Dimensions in Inches	
			Length	Diameter
622	\$1.75	24	$5\frac{5}{8}$	4
635	2.60	24	$6\frac{1}{8}$	$5\frac{1}{4}$
672	2.95	24	$6\frac{1}{8}$	$5\frac{1}{4}$
822	.80	48	$2\frac{7}{8}$	$2\frac{1}{2}$
823	1.30	48	$3\frac{5}{8}$	$2\frac{3}{4}$
824	1.25	48	$3\frac{1}{8}$	$2\frac{3}{4}$
826	1.05	48	$3\frac{1}{8}$	$2\frac{3}{4}$

Sec. I. IVANHOE INDUSTRIAL LINE

Schedule C

Suspensions and Brackets



No. 0659 and No. 0660



No. 0221



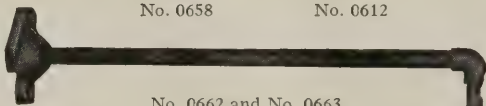
No. 0672
No. 0673



No. 0658



No. 0612



No. 0662 and No. 0663

The pipe suspensions and brackets except No. 0612 are made of $\frac{1}{2}$ -inch pipe, finished in black japan, and threaded with a $\frac{1}{2}$ -inch male thread. No. 0612 is made of $\frac{3}{8}$ -inch pipe, galvanized and with a crow foot at the top.

No. 0658 is an eye suspension with porcelain bushings, and a $\frac{1}{2}$ -inch male thread for outdoor use.

No. 0221 is a chain and canopy for hanging any unit tapped for $\frac{1}{2}$ -inch pipe.

No.	List Price Each	Standard Quantity	Dimensions in Inches		
			Length	Diameter of	
				Pipe	Canopy
0221	\$2.10	12	22	....	6
0612	.75		12	$\frac{3}{8}$	....
0658	.95		$3\frac{3}{8}$	$\frac{1}{2}$	....
0659	1.45		24	$\frac{1}{2}$	....
0660	1.70		36		....
0662	1.45		24		....
0663	1.70		36		....
0672	.75		12		....
0673	1.00		24		....

Nos. 0658 to 0673, inclusive, may be used for suspending Nos. 727, 728, 750, 754, 756, 782, 786, 790, 802, 804, 806, 808, shown in this catalog.

Sec. I. IVANHOE INDUSTRIAL LINE

Schedule R

Extensive Type, Porcelain Enamel Finish



Nos. EE-60, EE-75
EE-100, EE-200



No. BEE-1000
With Holder No. 672 showing
how canopy is raised on the
pipe when wiring the holder and
attaching the reflector.



No. BEE-500

Catalog No.	List Price Each	Standard Quantity	Dimensions in Inches		Recom- mended MAZDA Lamp Watts
			Diam.	Depth	
EE-60	\$0.85	50	7 $\frac{1}{4}$	4 $\frac{7}{8}$	25, 40, 60
EE-75	1.03	20	8 $\frac{1}{4}$	6	75
EE-100	1.05	20	8 $\frac{1}{4}$	6 $\frac{1}{2}$	100
EE-200	1.45	20	8 $\frac{1}{4}$	7 $\frac{1}{2}$	200
BEE-60	.83	50	7 $\frac{1}{4}$	4 $\frac{1}{8}$	25, 40, 60
BEE-75	1.00	20	8 $\frac{1}{4}$	5 $\frac{3}{4}$	75
BEE-100	1.02	20	8 $\frac{1}{4}$	6 $\frac{1}{4}$	100
BEE-200	1.42	20	8 $\frac{1}{4}$	7 $\frac{1}{4}$	200
BEE-500	2.40	10	12 $\frac{1}{4}$	7 $\frac{1}{2}$	300, 400, 500
BEE-1000	3.20	5	15	10 $\frac{3}{4}$	750, 1000

Use Holder and medium screw base socket Nos. 822, 824 or 826 for No. BEE-60. Use Nos. 822 and 823 for Nos. BEE-75, BEE-100 and BEE-200.

Use Holder and Mogul socket Nos. 622, 635 or 672 with Nos. BEE-500 and BEE-1000.

The D strap can be added to any "EE" reflector at a price of 6 cents each list additional. When ordering, specify, DEE-60, DEE-75, etc.

Sec. I. IVANHOE INDUSTRIAL LINE

Schedule R

Extensive Type "Cleavezy" Aluminum Finish



Nos. AE-60, AE-75, AE-100,
AE-200



BAE-60, BAE-75, BAE-100
BAE-200

Catalog No.	List Price Each	Standard Quantity	Dimensions in Inches		Recom- mended MAZDA Lamp Watts
			Diam.	Depth	
AE-60	\$0.65	50	7¼	5¾	25, 40, 60
AE-75	.78	20	8¼	6¾	75
AE-100	.80	20	8¼	7¾	100
AE-200	1.00	20	8¼	8¼	200
BAE-60	.62	50	7¼	5	25, 40, 60
BAE-75	.75	20	8¼	6½	75
BAE-100	.77	20	8¼	7½	100
BAE-200	.97	20	8¼	8	200

Use Holder and Medium Screw base socket Nos. 822 or 826 for Nos. BAE-60, BAE-75, BAE-100, BAE-200.

The D strap can be added to any "AE" reflector at a price of 6 cents each list additional. When ordering, specify, DAE-60, DAE-100, etc.

Intensive Type, Porcelain Enamel Finish

Numbers BEI-60, BEI-75, BEI-100, BEI-200, BEI-500 and BEI-1000, will be furnished as specials. Prices on request.

Sec. I. IVANHOE INDUSTRIAL LINE
Schedule R
Intensive Type, "Cleavezy" Aluminum Finish



Nos. AI-60, AI-75, AI-100, AI-200

Nos. BAI-60, BAI-75, BAI-100, BAI-200

Catalog No.	List Price Each	Standard Quantity	Dimensions in Inches		Recommended MAZDA Lamp Watts
			Diam.	Depth	
AI-60	\$0.65	50	7¼	5¾	25, 40, 60
AI-75	.78	20	8	6½	75
AI-100	.80	20	8¼	7½	100
AI-200	1.00	20	8¼	8	200
BAI-60	.62	50	7¼	5½	25, 40, 60
BAI-75	.75	20	8	5¾	75
BAI-100	.77	20	8¼	6¾	100
BAI-200	.97	20	8¼	7¾	200

Use Holder and medium screw base socket Nos. 822 or 826 for Nos. BAI-60, BAI-75, BAI-100, BAI-200.

The D Strap can be added to any "AI" reflector at a price of 6 cents each list additional. When ordering, specify, DAI-60, DAI-75, etc.



AF Type

Focusing Type,
"Cleavezy" Aluminum Finish

Catalog No.	List Price Each	Standard Quantity	Dimensions in Inches		Recommended MAZDA Lamp Watts
			Diam.	Depth	
AF-40	\$0.45	50	6½	4½	25, 40
AF-60	.65	50	8	5½	60
AF-75	.78	20	8¼	6	75
AF-100	1.00	20	10	7½	100
BAF-40	.42	50	6½	4¼	25, 40
BAF-60	.62	50	8	4¾	60
BAF-75	.75	20	8	5¾	75
BAF-100	.97	20	10	7½	100

Use Holder and medium screw base socket Nos. 822 or 826 for Nos. BAF-40, BAF-60, BAF-75, BAF-100.

The D Strap can be added to any "AF" reflector at a price of 6 cents each list additional. When ordering, specify, DAF-40, DAF-60, etc.

Sec. I. IVANHOE INDUSTRIAL LINE
Schedule R
Distributing Type, Porcelain Enamel Finish



Nos. ED-40, ED-60,
ED-75



No. DED-100



No. BED-500



No. BED-1000

Catalog No.	List Price Each	Standard Quantity	Dimensions in Inches		Recommended MAZDA Lamp Watts
			Diam.	Depth	
ED-40	.90	20	10	3¼	25, 40
ED-60	1.05	10	12	4¼	40, 60
ED-75	1.28	20	12	5½	75
BED-40	.87	20	10	3½	25, 40
BED-60	1.02	10	12	4	40, 60
BED-75	1.25	20	12	5	75
BED-100	1.72	10	15	6¼	100, 200
BED-500	2.65	5	18	6½	300, 400, 500
BED-1000	4.05	3	20	9½	750, 1000
DED-100	1.75	10	15	6¾	100, 200

Use Holder and medium screw base socket Nos. 822, 824 or 826 for Nos. BED-40 and BED-60. Use Nos. 822 or 823 for Nos. BED-75 and BED-100.

Use Holder Nos. 622, 635 and 672 with Nos. BED-500 and BED-1000.

The D Strap can be added to Nos. ED-40, ED-60 and ED-75, at a price of 6 cents each list additional. When ordering, specify, DED-40, DED-60, etc.

Sec. I. IVANHOE INDUSTRIAL LINE

Schedule R

Distributing Type, White Paint Enamel



Nos. PD-20, PD-40, PD-60, PD-75



DPD-100

These steel reflectors are finished with white paint enamel inside and green paint enamel outside. They are a highly efficient and durable but inexpensive unit for general illumination in industrial plants, warehouses, store rooms and similar locations. The paint enamel surfaces are baked on at a temperature far above that to which they will be subjected in use. These surfaces will not turn yellow from the heat of the lamp.

SHALLOW DOME TYPE

Catalog No.	List Price Each	Standard Quantity	Number in Carton	Dimensions in Inches		Recommended MAZDA Lamp Watts
				Diam.	Depth	
PD-20	\$0.35	40	10	8	3 1/8	20
PD-40	.45	20	5	10	3 3/4	25, 40
PD-60	.50	20	5	12	4 1/4	40, 60
PD-75	.68	20	..	12	5 1/8	75
DPD-100	.75 94	10	..	15	6 5/8	100
BPD-20	.32	80	..	8	2 1/8	20
BPD-40	.42	60	..	10	3 1/2	25, 40
BPD-60	.47	40	..	12	4	40, 60
BPD-75	.65	20	..	12	5	75
BPD-100	.72	20	..	15	6 1/4	100

Use Holder and medium screw base socket Nos. 822, 824, 826 for Nos. BPD-20, BPD-40, BPD-60. Use Nos. 822 or 823 for Nos. BPD-75 and BPD-100.

The D Strap can be added to any "PD" reflector at a price of 6 cents each list additional. When ordering, specify, DPD-60, DPD-75, etc.

Sec. I. IVANHOE INDUSTRIAL LINE

Schedule R

M-M Diffusers, Porcelain Enamel, for Outdoor Service



No. REMM-60



No. BEMM-60

M-M Diffusers are especially designed for outdoor service. They are made of heavy metal and the contour is so designed as to give the maximum rigidity. M-M Diffusers with the R holder are tapped at the top for suspension from $\frac{1}{2}$ -inch pipe. This holder is made for special service. The extensions for both R and B Holders are of extra heavy construction, so as to withstand the severest outdoor service.

Catalog No.	List Price Each	Standard Quantity	Dimensions in Inches		Recommended MAZDA Lamp Watts
			Diam.	Depth	
BEMM-60	\$1.25	10	12	3 $\frac{1}{8}$	25, 40, 60, 75
BEMM-100	1.75	10	15	5	100, 200
BEMM-500	3.55	5	20	6 $\frac{1}{4}$	300, 400, 500
REMM-60	2.30	5	12	5 $\frac{3}{8}$	25, 40, 60, 75
REMM-100	2.75	5	15	7 $\frac{1}{8}$	100, 200

Use Holder and medium screw base socket Nos. 822, 824 or 826 for No. BEMM-60. Use Nos. 822 or 823 for No. BEMM-100. Use Holders and Mogul sockets Nos. 622, 635 or 672 for No. BEMM-500.

Sec. I. IVANHOE INDUSTRIAL LINE

Schedule R

Angle Type, "Cleavezy" Aluminum Finish



Nos. AL-40, AL-60, AL-75



No. DAL-100



Nos. BAL-40, BAL-60,
BAL-75, BAL-100

Catalog No.	List Price Each	Standard Quantity	Dimensions in Inches		Recommended MAZDA Lamp Watts
			Diam.	Depth	
AL-40	\$0.45	50	6 $\frac{3}{8}$	5 $\frac{3}{8}$	25, 40
AL-60	.65	40	8	6 $\frac{3}{8}$	60
AL-75	.78	20	8	7 $\frac{3}{4}$	75
BAL-40	.42	50	6 $\frac{3}{8}$	5 $\frac{3}{8}$	25, 40
BAL-60	.62	40	8	6 $\frac{3}{8}$	60
BAL-75	.75	20	8	7 $\frac{1}{2}$	75
BAL-100	1.07	20	10	9 $\frac{1}{8}$	100, 200
DAL-100	1.10	20	10	9 $\frac{1}{2}$	100, 200

Use Holder and medium screw base socket Nos. 822 or 826 for Nos. BAL-40 and BAL-60. Use No. 822 for BAL-75 and BAL-100.

The D Strap can be added to Nos. AL-40, AL-60 at a price of 6 cents each list additional. When ordering, specify, DAL-40, DAL-60.

Sec. I. IVANHOE INDUSTRIAL LINE

Schedule R

Angle Type, Porcelain Enamel Finish



No. BEL-1000



No. BEL-500



Nos. EL-40, EL-60.
EL-75



No. DEL-100

For special angle reflectors designed for outdoor service, see page 19.

Catalog No.	List Price Each	Standard Quantity	Dimensions in Inches		Recommended MAZDA Lamp Watts
			Diam.	Depth	
EL-40	\$1.05	50	6 $\frac{5}{8}$	5 $\frac{5}{8}$	25, 40
EL-60	1.20	30	8	6 $\frac{7}{8}$	60
EL-75	1.33	20	8	7 $\frac{3}{4}$	75
BEL-40	1.02	50	6 $\frac{5}{8}$	5 $\frac{5}{8}$	25, 40
BEL-60	1.17	30	8	6 $\frac{5}{8}$	60
BEL-75	1.30	20	8	7 $\frac{1}{2}$	75
BEL-100	1.72	20	10	8 $\frac{3}{4}$	100, 200
BEL-500	3.15	5	12 $\frac{1}{4}$	11 $\frac{5}{8}$	500, 400, 300
BEL-1000	4.65	3	15	15 $\frac{3}{4}$	750, 1000
DEL-100	1.75	20	10	9 $\frac{1}{8}$	100, 200

Use Holder and medium screw base socket Nos. 822, 824 or 826 for Nos. BEL-40 and BEL-60. Use Nos. 822 or 823 for Nos. BEL-75 and BEL-100.

Use Holders Nos. 622, 635 and 672 with Nos. BEL-500 and BEL-1000.

The D Strap can be added to Nos. EL-40, EL-60, and EL-75 at a price of 6 cents each list additional. When ordering, specify, Nos. DEL-40, DEL-60, and DEL-75.

Sec. I. IVANHOE INDUSTRIAL LINE
Schedule R
For Heavy Duty Outdoor or Indoor Service



Nos. 18491, 18493



Nos. 18471, 18473



Nos. 18481, 18483

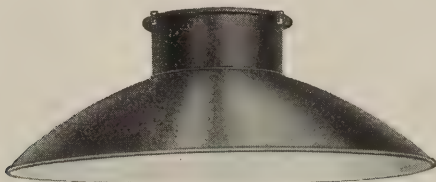
These Reflectors are especially designed for heavy duty service indoors and outdoors. With the exception of the copper extension at the top, all surfaces are heavily porcelain enameled, green outside, white inside. The cap is tapped for $\frac{1}{2}$ inch pipe suspension. It is fastened to the copper extension by machine screws. It will hold secure under all conditions and will not injure the porcelain. The bead of the reflectors at the lower edge is so rolled that it will shed water readily. For railway platform lighting, store front, and billboard lighting.

Catalog No.	List Price Each	Standard Quantity	Dimensions in Inches		Recommended MAZDA Lamp Watts
			Diam.	Depth	
18471	\$2.00	20	7 $\frac{1}{4}$	6 $\frac{3}{4}$	25, 40, 60
18473	2.25	10	8 $\frac{1}{4}$	8 $\frac{3}{4}$	75, 100, 200
18481	2.30	5	12	6	25, 40, 60, 75
18483	3.00	5	15	8 $\frac{1}{4}$	100, 200
18491	2.25	20	8 $\frac{3}{8}$	8 $\frac{3}{8}$	25, 40, 60, 75
18493	3.00	10	10	11 $\frac{1}{2}$	100, 200

Sec. I. IVANHOE INDUSTRIAL LINE

Schedule R

Reflectors for Crouse-Hinds Vapor Proof Condulets



Nos. 627 and 629

These reflectors are designed for use with Types "V" and "VH" Crouse-Hinds Vapor Proof Condulets and will fit the holding ring supplied by the Crouse-Hinds Co. The complete unit is vapor proof and is recommended for use in places where the lamp base and socket must be protected from acid fumes or moisture.

Catalog No.	List Price Each	Standard Quantity	Dimensions in Inches		Recommended MAZDA Lamp Watts
			Diam.	Depth	
*627	2.80	10	15	4½	25, 40, 60
†629	3.65	10	18	6½	100

Finish: White porcelain enamel inside, green porcelain enamel outside.

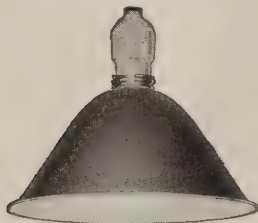
*For Type V Condulets.

†For Type VH Condulets.

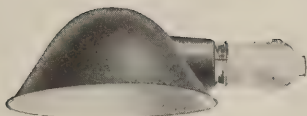
Sec. II. IVANHOE COUNTERLINE

Schedule C

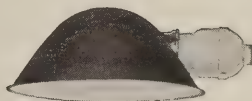
Horizontal and Pendant Types



A-58
A-78



A-35 A-55



A-155

These reflectors are used on portables and adjustable arms of many kinds for work table and reading table lighting.

Nos. A-58 and A-78 are hung pendant over machine tools and work benches where the strong downward light which they give is very useful.

PENDANT TYPE

Catalog No.	List Price Each	Standard Quantity	Number in Carton	Dimensions in Inches		Recommended MAZDA Lamp Watts
				Diam.	Depth	
A-58	.40	60	10	6 $\frac{5}{8}$	3 $\frac{3}{8}$	20, 25, 40
A-78	.55	40	10	8	4 $\frac{3}{8}$	25, 40, 60

HORIZONTAL TYPE—WITH EXTENSION

A-35	\$0.42	} 60	10	6	2 $\frac{1}{2}$	20, 25, 40
A-35 B.B.*	.75					
A-55	.44	} 60	10	6 $\frac{5}{8}$	3	25, 40, 60
A-55 B.B.*	.80					
DA-55	.50					

HORIZONTAL TYPE—WITHOUT EXTENSION

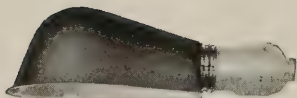
A-155	.40	60	10	6 $\frac{5}{8}$	3	25, 40, 60
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*Steel reflector brush brass finish.

Sec. II. IVANHOE COUNTERLINE

Schedule C

Pear-Shaped Half Shades



A-25



A-26

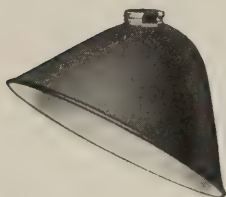
The pear-shaped reflectors are used on portables, brackets or adjustable arms for lighting machine tools, and they are used in wall cases or other places where the light is to be shaded from the eyes in one direction and concentrated strongly on a small area.

PEAR-SHAPED TYPE—HALF SHADES

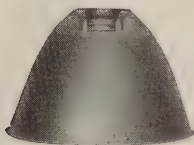
Catalog No.	List Price Each	Standard Quantity	Number in Carton	Dimensions in Inches		Recommended MAZDA Lamp Watts
				Diam.	Depth	
A-25	\$0.41	90	15	5 $\frac{7}{8}$	2 $\frac{1}{4}$	20, 25, 40
A-25 B.B.*	.70					
DA-25	.47					
A-26	.27	120	20	5 $\frac{5}{8}$	1 $\frac{5}{8}$	20, 25 40, 60
A-26 B.B.*	.60					

*A-25 B. B. is a brass reflector, brushed brass finish. No. A-26 B. B. is a steel reflector, brushed brass finish.

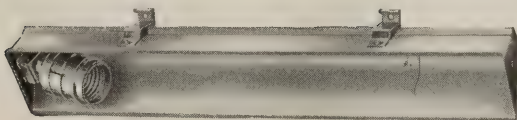
Sec. III. IVANHOE SPECIAL SERVICE REFLECTORS Schedule R



No. 633
Post Office Reflector



No. 460
Desk Lighting Reflector



No. 621
Show Case Reflector



No. 634
Sewing Machine Reflector

No. 460 is especially designed for lighting desks from drop cords. The clip spring and extension are reversed so as to put the lamp into proper position for a broad distribution of light without glare. Finish, Cleanezy aluminum.

No. 621 is installed in show cases, over cashiers' windows, on desk tops, and other locations where light is required from an extended light source.

No. 633 has been standardized by the U. S. Post Office Department for Mail Case Lighting. Outside finish, green porcelain; inside, white porcelain. Fits lock sockets.

No. 634 is used on bracket arms for sewing machine lighting. Finish, Cleanezy aluminum.

No. 751 is a porcelain enamel reflector similar to BEL-1000, used for tennis court lighting and motion picture studio lighting.

No. 795 is a cylindrical skirt finished in black japan, used on reflector BEE-1000, or BEI-1000, for overhead tennis court lighting.

Catalog No.	List Price Each	Standard Quantity	Dimensions in Inches		Recommended MAZDA Lamp Watts
			Diam.	Depth	
460	\$.95	40	8 $\frac{1}{4}$	5 $\frac{3}{8}$	25, 40
621*	3.70	20	†	†	‡25, 40
633	.90	40	8	6 $\frac{1}{8}$	15, 20, 25
634	.35	50	3 $\frac{3}{4}$	3 $\frac{1}{4}$	10, 15, 20
751	3.00	10	15	14 $\frac{3}{8}$	300, 400, 500
795	1.70	4	14 $\frac{1}{8}$	5 $\frac{1}{4}$	750, 1000

*Brass reflector, brushed brass finish.

†Length, 14 inches; width at mouth, 2 $\frac{1}{2}$ inches.

‡Tubular T-8 MAZDA Lamp.

Sec. III. IVANHOE SPECIAL SERVICE REFLECTORS

Schedule R

For Railway Car Lighting



Nos. 18461 and 18441
For Baggage Car Lighting



Nos. 18440 and 18460
For Body of Postal Cars



No. 18470
For Letter Racks of Postal Cars

Catalog No.	List Price Each	Standard Quantity	Dimensions in Inches		Recommended MAZDA Train Lighting Lamp Watts	Lamp Position
			Diam.	Depth		
18440	\$0.55	60	6 $\frac{3}{4}$	4 $\frac{3}{4}$	25	* Even
18441	.85	30	6 $\frac{3}{4}$	4 $\frac{3}{4}$	25	* Even
18460	.75	30	7 $\frac{3}{4}$	5 $\frac{3}{8}$	50	*1 $\frac{1}{8}$ in.
18461	1.05	30	7 $\frac{3}{4}$	5 $\frac{3}{8}$	50	*1 $\frac{1}{8}$ in.
18470	.65	40	8	4 $\frac{3}{8}$	25 50	† $\frac{1}{2}$ in. *1 $\frac{1}{8}$ in.

*Distance of End Contact of base of lamp above top of reflector.

†Distance of End Contact of base of lamp below top of reflector.

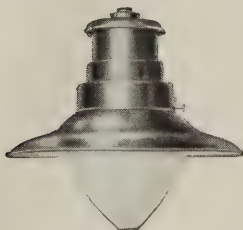
Finish of Reflectors: Nos. 18440, 18460, 18470, aluminum "Cleanzy."
Nos. 18441 and 18461, porcelain enamel, white inside and outside.

Sec. IV. IVANHOE MAZDA C UNITS

Schedule R



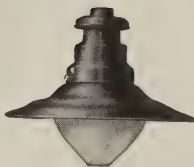
No. 808—Fixture and Glass
No. 809—Fixture Only
No. 774—Glass Only



No. 806—Fixture and Glass
No. 807—Fixture Only
No. 775—Glass Only



No. 804—Fixture and Glass
No. 805—Fixture Only
No. 775—Glass Only



No. 802—Fixture and Glass
No. 803—Fixture Only
No. 780—Glass Only

These units are built especially for outdoor service. They are porcelain enameled green outside with the reflector porcelain enameled white inside. The glass is Sudan; a high grade opal.

Catalog No.	List Price Each	Standard Quantity	Dimensions in Inches		Recommended MAZDA Lamp Watts
			Diam.	Depth	
802	\$3.40	24	12	12	100
803	2.50	12	12	6 $\frac{1}{4}$	.....
780	.90	24	6	6	.....
804	3.85	12	12	11 $\frac{3}{4}$	200
805	2.65	12	12	5 $\frac{1}{8}$	.....
775	1.20	12	8	8	.....
806	4.80	12	15	13 $\frac{3}{4}$	300, 400, 500
807	3.60	12	15	9 $\frac{1}{4}$	.....
775	1.20	12	8	8	.....
808	6.65	12	15	15 $\frac{1}{8}$	750, 1000
809	4.10	12	15	8 $\frac{7}{8}$	.....
774	2.55	12	12	12	.....

Sec. IV. IVANHOE MAZDA C UNITS

Schedule C

**Fixtures Finished With
Heat-Resisting Japan**



No. 790—Fixture and Glass
No. 791—Fixture Only
No. 780—Glass Only



No. 727—Fixture and Glass
No. 741—Fixture Only
No. 775—Glass Only



No. 728—Fixture and Glass
No. 729—Fixture Only
No. 775—Glass Only



No. 782—Fixture and Glass
No. 753—Fixture Only
No. 774—Glass Only

These fixtures are made of steel finished with a special japan. They will give satisfactory service out of doors and are the most desirable indoor unit for lighting spaces where low cost is a deciding factor.

*Catalog No.	List Price Each	Standard Quantity	Dimensions in Inches			Recom- mended MAZDA Lamp Watts
			Length Over All	Max. Diam.	Size of Holder	
790	\$3.00	24	9¾	6	4	100
791	1.75	24	4⅝	4½	4	100
780	1.25	24	6	6	4	100
727	3.45	12	12½	8	6	200
741	2.10	12	4½	6	6	200
775	1.35	12	8	8	6	200
728	3.80	12	14½	8	6	300, 400, 500
729	2.45	12	6½	6	6	300, 400, 500
775	1.35	12	8	8	6	300, 400, 500
782	5.60	12	19	12	8	750, 1000
753	2.55	12	7	8	8	750, 1000
774	3.05	12	12	12	8	750, 1000

*Fixtures include sockets, but are not wired.
Finish: Dark heat-resisting japan only.
Suspension: See page 10.

SEC. IV. PROMOTION FIXTURES

Schedule P



No. 750—Fixture and Glass
No. 749—Fixture Only
No. 780—Glass Only



No. 754—Fixture and Glass
No. 755—Fixture Only
No. 775—Glass Only



No. 756—Fixture and Glass
No. 757—Fixture Only
No. 775—Glass Only



No. 786—Fixture and Glass
No. 759—Fixture Only
No. 774—Glass Only

PROMOTION FIXTURES

These four units are made in two styles, green porcelain enamel and white porcelain enamel, with diffusing globes of opal glass. All fixtures are weather-proof. The usual Promotion line discounts apply—in accordance with Schedule P of our steel discount sheet.

Catalog No.	List Price Each	Standard Quantity	Dimensions in Inches			Recommended MAZDA Lamp Watts
			Length Over All	Max. Diam.	Diam. of Holder	
750	\$2.20	24	10	6	4	75, 100
749	1.40	24	4 $\frac{5}{8}$	4 $\frac{1}{2}$	4	
780	.80	24	6	6	4	
754	2.60	12	12 $\frac{1}{2}$	8	6	200
755	1.65	12	4 $\frac{1}{2}$	6	6	
775	.95	12	8	8	6	
756	3.15	12	14 $\frac{1}{2}$	8	6	300, 400, 500
757	2.20	12	6 $\frac{1}{4}$	6	6	
775	.95	12	8	8	6	
786	4.65	12	19	12	8	750, 1000
759	2.45	12	7	8	8	
774	2.20	12	12	12	8	

Fixtures include sockets, but are not wired.

The above prices cover the green porcelain enamel finish. White porcelain enamel finish will be supplied at \$0.30 additional to the list prices.

Sec. V. ENGINEERING SECTION

Recommendations for the Use of Ivanhoe Industrial Line Reflectors (Section I).

A BOOK could be written on the use of Ivanhoe reflectors in factory lighting. Only generalities will be touched on here. For detailed recommendations for any particular class of factory, write our Commercial Engineering Department.

Factory spaces may be illuminated by

General lighting

Local lighting

Group lighting

depending on the character of the space.

General Lighting

With general lighting, the room is lighted as a whole, without reference to the work done at any particular point in the room. The light at every point, with this system, should be good for the character of work performed in the room. This type of lighting is used for foundries, boiler-shops, paint-shops, assembly-rooms, shipping-rooms, warehouses, etc. The distributed unit-system, in which the lights are arranged in squares or rectangles nearly square, is employed. Where coarse work is performed the squares may be large; where fine work is performed they should be small. A size of square and mounting height such as to use the Intensive reflector at its correct spacing, is usually the best, but for fine work or very high ceilings, Focusing reflectors, correctly spaced should be used. For coarse work, the Extensive reflector and spacing is suitable, and for such places as warehouses even wider spacings are desirable with Distributing reflectors. The large sizes of MAZDA C lamps with Ivanhoe metal reflectors are especially good for general lighting in factories.

Local Lighting

Local lighting is the lighting of any individual machine or operation, usually with a single lamp and reflector. Local lighting is used for bench work, and for lathes, punch-presses, drawing-presses, etc.—any kind of work where light may be needed from a nearly horizontal direction or where a high intensity of illumination is required over a small area. Usually angle or focusing reflectors with small lamps are employed for this work. No. 634, page 23, is a small reflector used with 10 or 15-watt MAZDA or 30-watt Gem lamps. It is primarily for sewing machine lighting, but may be used for any similar class of work where local lighting is required. AL-40, AL-60, AF-40, and AF-60 are good reflectors for local lighting with their corresponding sizes of lamps. Fig. 1 shows a good example of local lighting. Local lighting is usually used as supplementary to general lighting of a low intensity.

Sec. V. ENGINEERING SECTION



Fig. 1

Group Lighting

Group lighting, or as it is often called, localized general lighting, consists in lighting a particular group of machines or a particular area worked on, by general lighting, but with light-units placed with reference to the work so as to obtain light on the work from the best directions. This type of lighting is particularly suitable for large rooms with many machines of the same type, covering for example such operations as weaving, cotton spinning, buffing, metal spinning, small printing-press work, etc. Fig. 2



Fig. 2

Sec. V. ENGINEERING SECTION

shows a cotton spinning room lighted by group lighting. It is sometimes difficult to distinguish between general lighting and group lighting, but in the former the room itself is lighted without reference to the location of the work, while in the latter the lights are always placed with particular reference to the location of the work. Group lighting is growing in favor. It is now being successfully applied to lathe work, all classes of bench-work, etc., classes of lighting which were formerly handled only by local lighting.

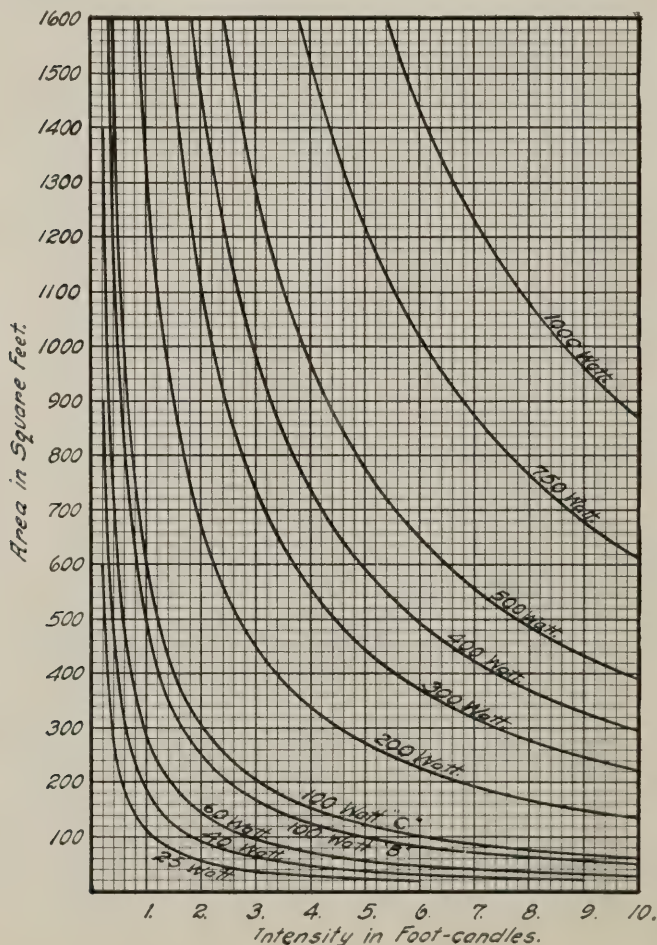


Fig. 3

Sec. V. ENGINEERING SECTION

Illumination Chart

On account of the small effect of ceiling and wall reflection in lighting systems using metal reflectors, it is possible to present a chart (Fig. 3) which will show at a glance the size lamp at a given spacing or the spacing for a given size lamp to obtain any desired intensity of illumination. This chart assumes rooms of average size with average surroundings. In small installations (6 lights or less) especially if the walls are dark, it is well to allow 5 to 15% more light than that shown by the chart. In very large installations, especially if the walls are light, the efficiency will be somewhat better than the chart indicates.

Use of the Chart

For general illumination which is to be supplemented by local lights at the various machines or work benches, allow $1\frac{1}{2}$ foot-candles. For general illumination not supplemented by local lights, allow $3\frac{1}{2}$ foot-candles for ordinary work (assembling, painting, packing, etc.) running up to 6 foot-candles for fine work and even 8 or 10 foot-candles for fine work on dark goods. For warehouses, stock-rooms, etc., allow about 1 foot-candle.

The room to be lighted by general illumination should be divided into squares or rectangles as nearly square as possible, placing a light at the center of each square. Knowing the area of the square or rectangle and the foot-candle intensity of illumination desired, reference to the chart will show what size lamp to use. Select the lamp whose curve is next above the point of meeting of the horizontal line representing area and the vertical line representing foot-candles. If the point does not fall near a lamp curve, the size of square or rectangle may be increased or decreased. If it is desired to use a certain size of lamp, the problem may be worked the other way; starting with the size lamp and foot-candle intensity desired, the area which the lamp will illuminate can be determined from the chart. The selection of the best size of square or rectangle is important. See the remarks above under general illumination and those below under selection and spacing of reflectors.

Selection and Spacing of Reflectors

The type of reflector to use, the mounting height and spacing should be determined from the spacing diagram—Fig. 4. In general reflectors should be mounted high to place them out of

Sec. V. ENGINEERING SECTION

the range of ordinary vision. This means that when there is a choice between two reflectors, the more concentrating is ordinarily the more desirable. For example, if the choice lies between extensive reflectors at an 8 foot mounting height and intensive reflectors at an 11 foot mounting height, the intensive type is the better one to select.

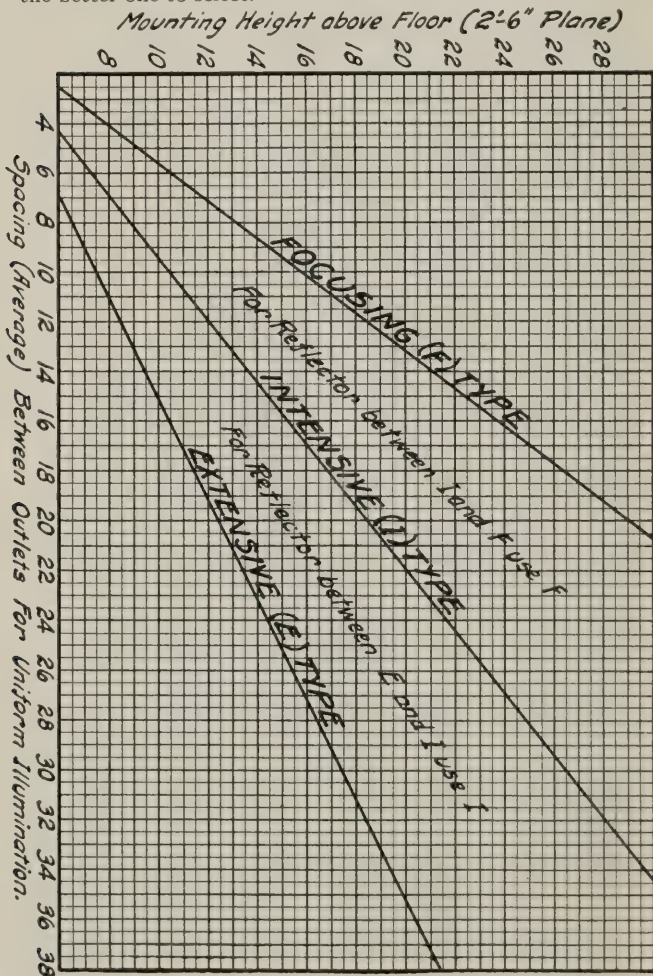


Fig. 4

Sec. V. ENGINEERING SECTION

Intensive and focusing reflectors are best where fine or exacting work is performed; extensive reflectors for rougher work. The intensive spacing is the best for the great majority of cases. In general, therefore, it is best to select a size of square or rectangle such that intensive reflectors can be used at their correct spacing and obtain a reasonable mounting height. For fine or exacting work, the squares should be such that intensive or focusing reflectors can be used.

Distributing reflectors are not designed for installations in which uniform illumination is desired. They are usually used for warehouses, stock-rooms, etc., where the spacing would be 2 to 4 times the mounting height. For uniform illumination, the reflector giving the widest distribution is the extensive which is spaced 2 times the mounting height. Distributing reflectors give some light at higher angles than extensive but not enough to produce uniform illumination. Some engineers recommend distributing reflectors in work-rooms spaced at about 1.6 times the mounting height above the plane to be lighted. In many cases there is a slight efficiency advantage to be gained by this, but, in general, we consider it better practice to use deep bowl reflectors for work-rooms as they shield the lamp filament better than the shallower distributing type. This shielding is especially important with MAZDA C lamps.

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NUMERICAL INDEX

The following Catalog Nos. are dropped from the line of Ivanhoe Metal Reflectors as listed in Cat. No. 303.

626..... 627
628..... 629
640.....
646..... 808
669..... 809
697.....
722..... *
723..... *
734..... *
736..... *
742.....
744..... 774
748..... *
760..... 754 or 727
761..... 755 or 741
762..... 756 or 728
763..... 757 or 729
765..... 759 or 753
771.....
772.....
773.....
777..... 01218 x 10 Druid
778..... 01210 x 12 Druid
779..... 01206 x 12 Vel.
784..... 786 or 782
785..... 01218 x 7 Druid
788..... 750 or 790
789..... 749 or 791
796.....
797..... *
825..... 826
3069..... *
18415.....
0821.....
0822.....
0823.....
0824.....
0825.....
0826.....
0827.....
0836.....
08210.....
08220.....
08230.....
08241.....
08252.....
08263.....
08271.....
08360.....
A-17..... PD-20
A-18..... PD-40
A-19..... PD-40 or PD-60
A-37..... AF-40 or A-58
A-38..... AF-40 or A-58
A-135..... A-155
AE-40..... AE-60
BAE-40..... BAE-60
BAE-500..... BEE-500
BAE-1000..... BEE-1000
CAE-40..... BAE-60
CAE-60..... BAE-60
CAE-100..... BAE-100
CAE-200..... BAE-200
EE-40..... EE-60
BEE-40..... BEE-60
CEE-40..... BEE-60
CEE-60..... BEE-60
CEE-100..... BEE-100

The following Catalog Nos. may be substituted for those which have been dropped from the line.

The following Catalog Nos. are dropped from the line of Ivanhoe Metal Reflectors as listed in Cat. No. 303.

CEE-200..... BEE-200
REE-40..... BEE-60
REE-60..... BEE-60
REE-100..... BEE-100
REE-200..... BEE-200
SEE-40..... BEE-60
SEE-60..... BEE-60
SEE-100..... BEE-100
SEE-200..... BEE-200
AI-40..... AI-60
BAI-40..... BAI-60
BAI-500..... BEE-500
BAI-1000..... BEE-1000
CAI-40..... BAI-60
CAI-60..... BAI-60
CAI-100..... BAI-100
CAI-200..... BAI-200
AF-200..... AI-200 or AF-100
BAF-200..... BAI-200 or BAF-100
CAF-40..... BAF-40
CAF-60..... BAF-60
CAF-100..... BAF-100
CAF-200..... BAF-100
AD-25..... ED-40 or PD-40
AD-40..... ED-40 or PD-40
AD-60..... ED-60 or PD-40
AD-100..... DED-100 or DPD-100
AD-200..... DED-100
BAD-25..... BED-40 or BPD-40
BAD-40..... BED-40 or BPD-40
BAD-60..... BED-60 or BPD-60
BAD-100..... BED-100 or BPD-100
BAD-200..... BED-100
BAD-500..... BED-500
CAD-25..... BED-40 or BPD-40
CAD-40..... BED-40 or BPD-40
CAD-60..... BED-60 or BPD-60
CAD-100..... BED-100 or BPD-100
CAD-200..... BED-100
ED-20..... ED-40 or PD-20
BED-20..... BED-40 or BPD-20
CED-20..... BED-40 or BPD-20
CED-40..... BED-40
CED-60..... BED-60
CED-100..... BED-100
RED-20..... BED-40 or BPD-20
RED-40..... BED-40
RED-60..... BED-60
RED-100..... BED-100
SED-20..... BED-40 or BPD-20
SED-40..... BED-40
SED-60..... BED-60
SED-100..... BED-100
AL-25..... AL-40
BAL-500..... BEL-500
BAL-1000..... BEL-1000
CAL-40..... BAL-40
CAL-60..... BAL-60
CAL-100..... BAL-100
CEL-40..... BEL-40
CEL-60..... BEL-60
CEL-100..... BEL-100
REL-40..... BEL-40
REL-60..... BEL-60
REL-100..... BEL-100

The following Catalog Nos. may be substituted for those which have been dropped from the line.

*Now handled by Nela Specialties Division, National Lamp Works, Cleveland, Ohio.



**Scientifically Designed
Reflectors**